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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,419	01/26/2004	Nobuto Fujiwara	008312-0307911	4557

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EXAMINER	
CHANDRAN, BIJU INDIRA	
ART UNIT	**PAPER NUMBER**
2835	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/763,419	FUJIWARA ET AL.	
	Examiner	Art Unit	
	Biju Chandran	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/26/04, 4/15/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3, 5-9, 12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Dibene, II et al. (PGPub US 2002/0021556 A1).

   - Regarding claim 1, Dibene II et al. disclose a heat dissipating device (300) which dissipates heat from a heat generating object (206), comprising: a heat receiving unit (301) having a heat receiving surface and a heat dissipating surface in an opposite side the heat receiving surface, the heat receiving surface being thermally connected to the heat generating object (Figure 2, paragraph 0032); a heat transferring unit (306) mounted on the heat dissipating surface of the heat receiving unit, transferring the heat received in the heat receiving surface, and diffusing the transferred heat to the heat dissipating surface; and a heat dissipating unit (305) mounted on the heat dissipating surface of the heat receiving unit, and dissipating the diffused heat.

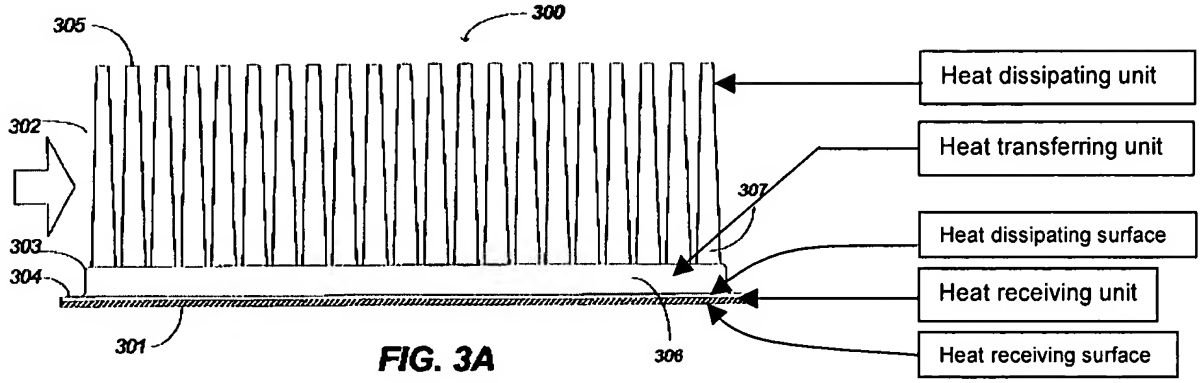


FIG. 3A

- Regarding claim 2, Dibene II et al. disclose all the limitations of claim 1. Dibene et al. II further disclose that the heat transferring unit extends along the heat dissipating surface of the heat receiving unit (paragraph 0032), a cross section of the heat transferring unit, which is along a direction crossing a longitudinal direction of the heat transferring unit, being flattened, and a flat portion of the heat transferring unit in the flattened cross section is thermally connected the heat dissipating surface of the heat receiving unit (evident from the figures).
- Regarding claim 3, Dibene II et al. disclose all the limitations of claim 2. Dibene et al. II further disclose that the heat transferring unit includes at least one heat pipe.

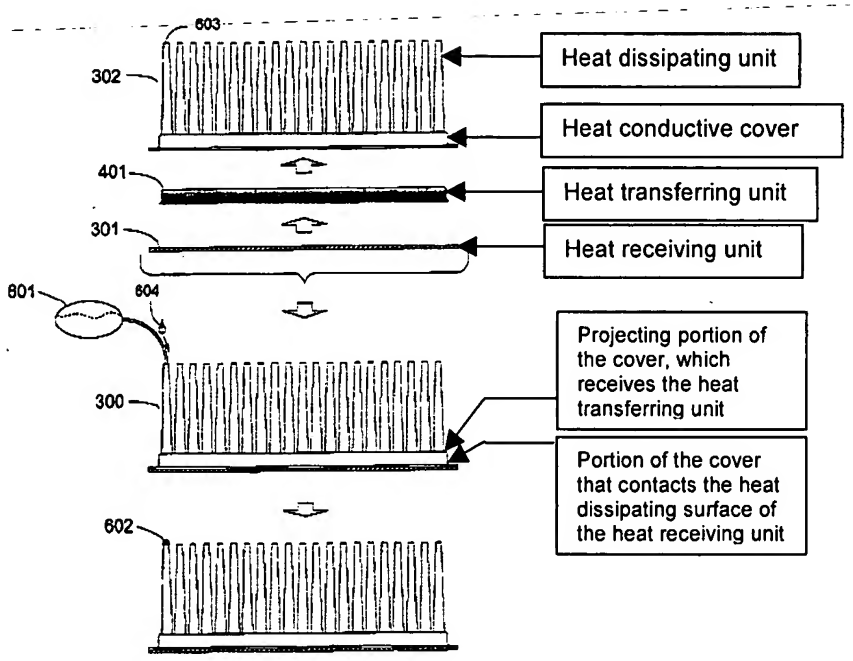


Fig. 6

- Regarding claim 5, Dibene II et al. disclose all the limitations of claim 1. Dibene et al. II further disclose a heat conductive cover, which is arranged between the heat transferring unit and the heat dissipating unit, and covers the heat transferring unit.

- Regarding claim 6, Dibene II et al. disclose all the limitations of claim 5. Dibene et al. II further disclose that the heat conductive cover is configured by a plate, and includes a portion which contacts the heat dissipating surface of the heat receiving unit, and a projecting portion, which projects from the heat dissipating surface and receives the heat transferring unit.

- Regarding claim 7, Dibene II et al. disclose all the limitations of claim 6. Dibene et al. II further disclose that the heat transferring unit extends along the heat dissipating surface of the heat receiving unit, and an outer surface of the heat transferring unit is thermally connected to the heat dissipating surface of the heat receiving unit and an inner surface of the projecting portion of the heat conductive cover.

- Regarding claim 8, Dibene II et al. disclose all the limitations of claim 7. Dibene et al. II further disclose that the cross section of the heat transferring unit, which is along a direction crossing the longitudinal direction of the heat transferring unit, is flattened, one of a pair of flat regions in the outer surface of the heat transferring unit is thermally connected to the heat dissipating surface of the heat receiving unit, and another of the pair of flat regions in the outer surface of the heat transferring unit is thermally connected to the inner surface of the projecting portion of the heat conductive cover (evident from the figures).

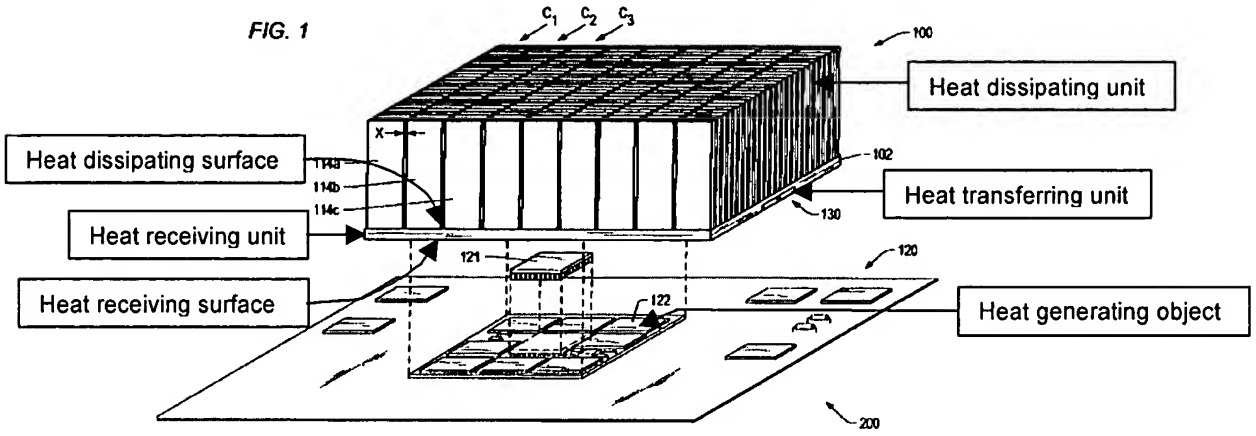
- Regarding claim 9, Dibene II et al. disclose all the limitations of claim 8. Dibene et al. II further disclose that the heat transferring unit includes at least one heat pipe.

- Regarding claim 12, Dibene II et al. disclose all the limitations of claim 5. Dibene et al. II further disclose that the heat transferring unit extends along the heat dissipating surface of the heat receiving unit, a cross section of the heat transferring unit along a direction crossing a longitudinal direction of the heat transferring unit being flattened, one of a pair of flat regions in an outer surface of the heat transferring unit is thermally connected to the heat dissipating surface the heat receiving unit, and another of the pair of flat regions in the outer surface the heat transferring unit thermally connected to the heat conductive cover.

- Regarding claim 14, Dibene II et al. disclose all the limitations of claim 12. Dibene et al. II further disclose that the heat transferring unit includes at least one heat pipe.

2. Claims 15-17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Chao (US Patent 6,424,528 B1).

FIG. 1



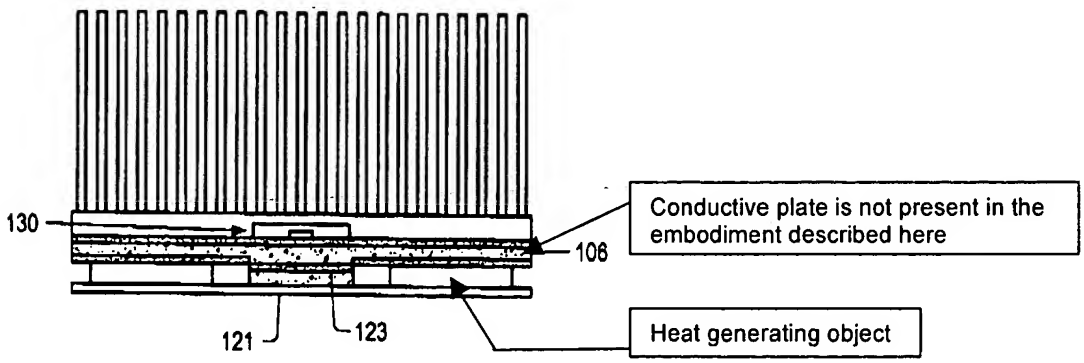


FIG. 4

- Regarding claim 15, Chao discloses a heat dissipating device which dissipates heat from a heat generating object (122), comprising: a heat receiving unit having a heat receiving surface and a heat dissipating surface in an opposite side of the heat

receiving surface, the heat receiving surface being thermally connected to the heat generating object (figure 4 & column 4, lines 53-56); a heat transferring unit mounted on the heat receiving surface of the heat receiving unit with excluding a part of heat receiving surface thermally connected to the heat generating object, transferring the heat received in the heat receiving unit, and diffusing the transferred heat to the heat dissipating surface; and a heat dissipating unit mounted on the heat dissipating surface of the heat receiving unit, and dissipating diffused heat.

- Regarding claim 16, Chao discloses all the limitations of claim 15. He further discloses that the heat transferring unit extends along the heat receiving surface of the heat receiving unit (figure 1A) with excluding the part of the heat receiving surface thermally connected to heat generating object, a cross section of the heat transferring unit, which is along a direction crossing a longitudinal direction of the heat transferring unit, is flattened (column 6, line 53), and a flat portion of the heat transferring unit in the flattened cross section is thermally connected to the heat receiving surface of the heat receiving unit with excluding the part of the heat receiving surface thermally connected to the heat generating object (seen in attached figures).

- Regarding claim 17, Chao discloses all the limitations of claim 16. He further discloses that the heat transferring unit includes at least one heat pipe.

- Regarding claim 19, Chao discloses an electronic apparatus, comprising: circuit board (120) including an electronic part generating heat (122); a main body installing the circuit board (abstract, line 3-4); a heat dissipating device (100) dissipating the heat from the electronic part, the heat dissipating device including a heat receiving unit having a heat receiving surface and a heat dissipating surface in an opposite side of the heat receiving surface, the heat receiving surface being thermally connected to the electronic part; a heat transferring unit mounted on the heat dissipating surface of the heat receiving unit, transferring the heat received in the heat receiving unit, and diffusing the transferred heat to the heat dissipating surface; and a heat dissipating unit mounted on the heat dissipating surface of the heat receiving unit, and dissipating the diffused heat (shown in attached figures).

- Regarding claim 20, Chao discloses all the limitations of claim 19. He further discloses that the heat transferring unit extends along the heat dissipating surface of the heat receiving unit, a cross section of the heat transferring unit, which is along a direction crossing a longitudinal direction of the heat transferring unit, being flattened, and transferring unit in thermally connected to surface of the heat receiving flat portion of the heat the flattened cross section is the heat dissipating unit.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Dibene II et al. Dibene II et al. discloses all the limitations in claim 6. Dibene II et al. do not expressly disclose that the heat dissipating unit includes a recess, which fits over the projecting portion of the heat conducting cover. At the time the invention was made, it would have been an obvious matter to one of ordinary skill in the art to incorporate a recess

in the heat dissipating unit to fit on the projecting portion of heat conductive cover for the purpose of preventing lateral motion of the cover.

4. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dibene II et al., in view of Ikeda et al. (PGPub US 2001/0025701 A1). Dibene II et al. discloses all the limitations in claim 10 and claim 12. Dibene II et al. do not expressly disclose that the heat dissipating unit includes heat dissipating plates that are formed independently to each other. Ikeda et al. disclose a heat dissipating device wherein the heat dissipating unit includes a plurality of heat dissipating plates, which are formed independently of each other (Ikeda et al., paragraph 0014). At the time the invention was made, it would have been obvious matter to a person of ordinary skill in the art, to modify the heat dissipation unit disclosed by Dibene II et al., with the teachings of Ikeda et al., to realize the space saving and the increased efficiency of the heat dissipating means (Ikeda et al., paragraph 0011)

5. Claim 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Chao, in view of Ikeda et al. (PGPub US 2001/0025701 A1). Chao discloses all the limitations in claim 15. Chao does not expressly disclose that the heat dissipating unit includes heat dissipating plates that are formed independently to each other. Ikeda et al. disclose a heat

dissipating device wherein the heat dissipating unit includes a plurality of heat dissipating plates, which are formed independently of each other (Ikeda et al., paragraph 0014). At the time the invention was made, it would have been obvious matter to a person of ordinary skill in the art, to modify the heat dissipation unit disclosed by Chao, with the teachings of Ikeda et al., to realize the space saving and the increased efficiency of the heat dissipating means (Ikeda et al., paragraph 0011)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Biju Chandran whose telephone number is (571) 272-5953. The examiner can normally be reached on 8AM - 5PM. Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LYNN FEILD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800